



Ø BEAT



COLO. SPRINGS,
COLORADO

JUNE 1981

Expand Your 7800's World

MARS AND CAP COVERAGE FOR KENWOOD TR7800

The TR 7800 may be modified to reach frequencies between 142.000 and 149.995 MHz. Since the CAP frequency is 148.150 and the TR7800 already covers that portion of the band, it was only necessary to modify the unit to go below 143.900.

The key to the modification is the programmable divider which uses a TC9122 chip. Frequency determination is accomplished by holding the divider pins five through 15 either high or low. If pin 13 of the TC9122 is high, grounding it will cause the output frequency to drop 4 MHz. If pin 12 is high, grounding it will drop the frequency 2 MHz. Because the MARS frequencies have a non-standard split, 1.305 MHz, it is necessary to use memory 0 or 14. The MARS frequencies are 143.460 MHz receive from the repeater and 142.155 MHz transmit to the repeater.

The modification is as follows:

1. Connect a wire from pin 12 to the normally closed contact of a small single pole double throw relay.
2. Connect a wire from pin 13 to the normally open contact of the same relay.
3. Remove the 2-wires and small capacitor from the tone switch and tape back the wires to prevent shorting to each other or ground. (Note: this mode will not allow use of a CTSS tone when completed.)
4. Connect a wire from the arm of the relay to the normally open side of the tone switch.
5. Connect a wire from the arm of the tone switch to ground.
6. Connect a wire from one side of the relay coil to the other normally open side of the tone switch.
7. Connect a wire from the arm of the tone switch to +12 v DC source.

8. Connect a wire from the other side of the relay coil to the PTT pin on the microphone jack.

Once this has been done, the radio will function normally with the tone switch in the out position and on MARS frequency when the tone switch is pushed in.

*Set the following frequencies into memory zero (0) or 14.

Receive — 145.460 dial 5.460

Transmit — 146.155 dial 6.155

Measurements were made of the radio performance before and after the modification. No degradation occurred on the 144 to 148 segment after the modification. Receiver sensitivity was .1 uv less at 141 MHz and no degradation of the transmitter output.

(continued on page 5)

CORRECTION

In last month's article about powerless tuning of antennas, a couple of formulas were printed with something missing — the division sign. A schematic was also left out. We apologize and here are the correct formulas in their context. The schematic is on page 5.

"An electrical half wavelength of coax will be physically less than $400 \div \text{frequency (MHz)}$ and more than $250 \div \text{frequency (MHz)}$. Example: for 28 MHz, the coax length will be less than $400 \div 28 = 14.3 \text{ ft.}$, and more than $250 \div 28 = 9 \text{ ft.}$ If the velocity factor is accurately known, the length of coax will be $492 \text{ feet} \times \text{velocity factor} \div \text{frequency (MHz)}$. Coax normally has a velocity factor of more than 0.5 and less than 0.8"

Sorry about that Oak.

(continued on page 5)

P.P.R.A.A. DIRECTORS

PRESIDENT	Dave Vierling NØDV 2511 N. Tejon 80907	473-0293
V. PRESIDENT	• Les Borst WDØGTA 2542 E. Bijou 80909	634-3995
SECRETARY	• Bill Allen KFØW 1341 Doyle Pl. 80915	597-3324
TREASURER	• Doug Moloney WBØMHP 3817 Vaquero Cir. So. 80918	599-9605
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Board Member	Charleen Colvin WBØYOB 4610 Topaz 80918	598-7704
Board Member	• Al Bailey ADØZ 2715 Alteza Ln. 80917	597-8514

(* Two-year board terms began October 1980)

ZERO BEAT is published monthly in the interest of the members of the Pikes Peak Radio Amateur Association, Inc., Colorado Springs, Colorado. Permission is given to reprint articles or excerpts provided credit is given. Deadline for submission of articles is the 21st of the month. Classifieds accepted anytime.

The Pikes Peak Radio Amateur Association meets on the second Wednesday of every month at the First United Methodist Church, 420 N. Nevada, at 7:30 p.m. All amateurs and interested parties are invited to attend.

Editor: Don Lohse KBØKQ, 1410 E. LaSalle, Colorado Springs, CO 80907 635-7469

MAY MEETING MINUTES

The May meeting of the Pikes Peak Radio Amateur Association was called to order at 7:30 PM by club president Dave Vierling, NØDV.

The place was Sabin Jr. High School.

The 39 members and guests present introduced themselves.

The Outhouse Race was reported on by Doug WBØMHP. Thanks to the 13 hams who worked the event, Doug mentioned that our organization was supposed to provide back up communication but before the event started we were shifted to primary status. Good show gang!

Mike KØTER announced that May 16th was "Walk for Mankind" and as always he needed more warm bodies to help with communications.

Mike also said that Field Day preparations are coming along nicely. Thanks to the many hams who have donated the use of their equipment. He has the phone and the CW station covered. Also 6 and 2 meters will be operated during the event. Field Day(s) is the 27th and 28th of June. It will be the same place as last year on the Rampart Range Road. For further information call Mike Stansberry at Hewlett Packard — Exit 2317 or Dave NØDV.

Don KBØKQ gave a report on the status of the much hoped for club station, short and sweet: down the tube. Turns out they turned us down for the same reason as they did the first time. Can't help but wish they would have said so in the first place 'cause some of us put some time and effort into coming up with a nice written proposal to the O.T.C. Anyhow — keep your ear to the rail as we're still looking.

Also from Don KBØKQ: Spring Spree will be June 20—21 and we need hams to help the organizers of the event keep in contact. This is more or less a "laid back" kind of deal so if you have never worked a public service event before it would be a good time to get your feet wet.

Dave NØDV announced that Biz WDØHCO our fearless and hardworking public relations man is off in the wilds of the South Pacific somewhere. Thanks to Biz for a job well done. However the job of P.R. person is

now vacant and that is bad news for the club. This is one of the most vital areas of our organization and badly needs to be filled. There are many tasks within the club that need to be done and this one is by no means the most work; so please call any board member if you are even remotely interested.

Dave also announced that this was the last PPRAA meeting at Sabin Jr. High. For the summer, next months meeting will be at the First United Methodist Church located at Nevada and Boulder, same time and date.

The CCARC (Colorado Council of Amateur Radio Clubs) was discussed again. It was decided to send CCARC a letter explaining our clubs displeasure at their lack of communication with us and to let them know that if the situation does not change after one year that the PPRAA will withdraw its membership. Dave NØDV asked for a new delegate to CCARC And Bud Libengood volunteered his services. Bud will be attending CCARC meetings and will be our two way link with that organization.

(continued on page 3)

If it's CW, it's communications.

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John WAØA DV

CW

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Ten Commandments To Kill An Organization

1. Always have something else to do on meeting night.
2. If you attend a meeting, be sure to find fault with the officers and other club members.
3. Decline to hold office, as it is easier to criticize than be criticized.
4. Get sore if you are not put on a committee.
5. When you get on a committee, fail to serve.
6. If the president or anyone else for that matter, asks for opinions, by all means, keep silent, but later tell others what should have been done.
7. When a few people roll up their sleeves to help, always preach that a clique is running the club.
8. Stick to telling what you have done in the past for the club, never look to the future.
9. Delay paying your dues as long as possible and never answer requests.
10. Never bother to help get new members — let everybody else do it.

Reprinted from YTARC Smoke Signals

Meeting Minutes (cont.)

Doug WBØMHP gave the treasury report. Doug always gives a pretty detailed account of the money situation (which I can never get straight) but the bottom line was a balance of \$1776.99 on meeting night.

Oak KØROL, (newly elected CCARC Vice Chairman) announced that he has some CCARC Colorado Repeater Directors available.

It was decided to have an antenna making party at the Covlins house. We were going to get together and make some nice dipoles complete with center supports and home made baluns. The date was to be May 17th (the day it rained all day — look for a rain date.)

Smitty WBØLTV announced that the IEEE will have an Amateur Radio Conference at the Denver Hilton at 7 PM June 17th. This sure sounds like it will be an interesting event.

Dave NØDV told us that there was a need, in the Colorado Springs area, for an official ARRL Bulletin Station. Its purpose would be to receive and disseminate information from the ARRL. Anyone interested should probably tell someone.

Ray AAØL announced that the VHF contest will be June 13—14th.

This month's program was a talk by Smitty WBØLTV on wire antennas.

Next months program will be devoted to Field Day preparation.

73,
Bill, KFØW

EDITOR'S NOTE

Due to a conflict at the end of June, all articles for Zero Beat **must** I repeat **must** be in to me no later than June 20th. If I don't have enough for an issue by then, the only solution is to skip an issue of Zero Beat. I don't want that to happen, but it is a possibility. Sit down right now and do that article — and then send or give it to me. Let's keep the string unbroken.

SPRINGSPREE

Colorado Springs' annual open air fair — Springspree — is on for the 20th and 21st of June. We are in need of a number of people to help in providing communications for the organizers. Responsibilities will include:

1. On Saturday morning at 8:00, keeping an eye on runners in the foot race, and then later Saturday morning providing coordination for the bed races that are held on Pikes Peak Avenue. Until 12 noon, all events will occur in and around the center of downtown and Acacia Park.

2. From noon until 6:00 on Saturday and Sunday, providing the organizers with communications to various parts of the fair in Monument Valley Park. We will staff both a Red Cross position and one in the main pavilion with the people in charge. Other people will be circulating in the park all day, to report problems and relay solutions for the many things that come up. It is a very relaxed, pleasant job, with plenty of time for a family picnic, leisurely walks or just relaxing under a tree watching the people go by.

If you don't have all day to help, even a couple of hours while you're in the park would be of great service, (and give some of the rest of us a break for lunch or whatever). Bring the family and your portable and get in on the net. The Springspree people really appreciate what we do, and tells us so. Get a hold of me (Don KBØKQ) at 635-7469 so I can get an idea of who will be where at what time. Take a walk in the park — work Springspree!

Typesetting courtesy The Letter Setters

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BOARD MINUTES

The May 18, 1981 Board of Directors Meeting was held at Doug Maloney's house. Present were: Ray AAQ, Don KBØKQ, Dave NØDV, Al ADØZ, Doug WBØMHP, Les WDOGTA, Bill KFØW and our new delegate to CCARC Bud Libengood.

The first item of business was CCARC: they have agreed to halt commercial sale of CCARC Callbooks for three months to allow clubs (like us) to sell the ones we have on hand.

Also relative to CCARC; Doug WBØMHP, club treasurer, is sending a check to CCARC for our annual dues. It will be in the amount of ten cents a head for every paid up member of PPRAA.

Next: Field Day was discussed. Mike KØTER is handling the arrangements this year. He reportedly has the CW and phone stations lined up for sure; there are many prospects for VHF stations. There was also mention made of the possibility of live TV coverage this year.

The need for an official ARRL Bulletin Station was discussed. The situation is this: there is much information sent out each month by the ARRL that most of us never hear about until QST Magazine is published. What is needed is someone to receive this information from ARRL — by mail, telephone, or by listening to the ARRL bulletins and then transmit the information on 2 meters or on an H.F. net. If you think you may be interested please call Dave NØDV.

Meanwhile, back at the Outhouse Race, turns out that the club (PPRAA) borrowed a coax cable from Smitty, WBØLTV. Said cable was damaged by the "other" radio people. Anyhow the Board decided to buy a new cable for Smitty and bill the Outhouse Race Committee for it.

CCARC has offered to sell the club Colorado Repeater Directories for six dollars per hundred. The Board declined.

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Next a subject near and dear to us all was discussed — and cussed. To wit the club's corporate status. Turns out that the club may not be properly incorporated. Thanks to Marilyn Howell, Doug Maloney and Bill Allen a vast project has been undertaken to fill that need to be filed to insure that the PPRAA is 100% legal. The end result of all this should be a tax free status for the club. The report is this: we are working on it.

The TVI Committee was discussed at some length. After many years of fine service Ray AAQ and Doug WBØMHP (who have done most of the TVI work) want to kick back a bit. Greg Utterback KAØFOZ will be the new head of the TVI Committee. Serving on the committee will be: KBØKQ Don, KAØDST Ken, WDOGTA Les, and KFØW Bill. A big bonus here was Ray AAQ offering to teach a class on curing TVI and dealing with TVI complaints.

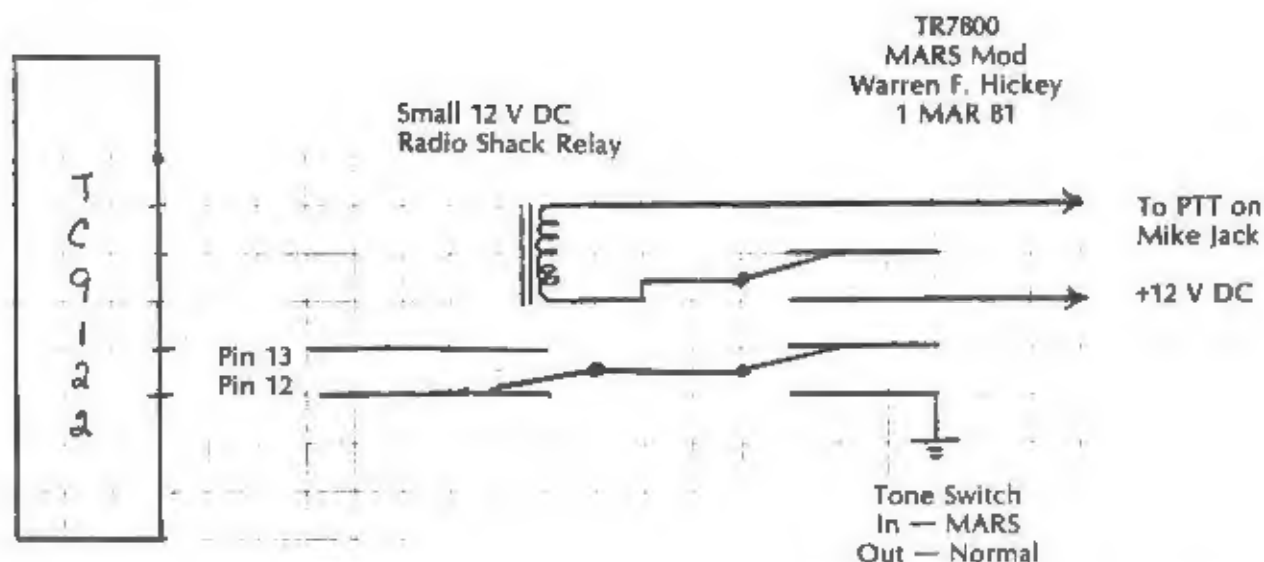
The club by-laws were talked about. Bill KFØW and Don KBØKQ will update and ammend same as seems necessary and will very soon present a new set of club by-laws to the membership for a vote.

A rain date of May 31st was set for building the antennas that didn't get built on May 17th.

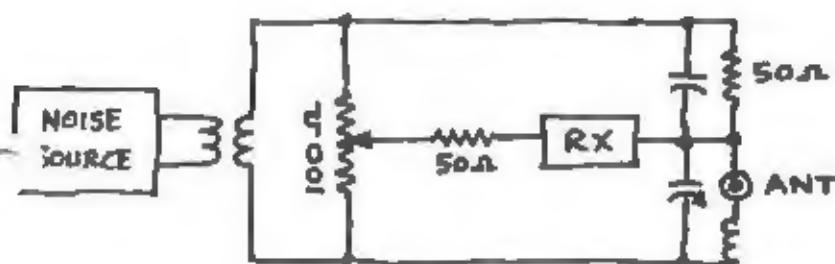
Spring Spree will be June 20 and 21 this year. PPRAA will do its part by handling communications. Don KBØKQ says we will need several people with 2 meter portables.

Don KBØKQ says that it is becoming increasingly difficult to get Zero Beat together each month. He needs a back log of articles very badly. Don has done a hell lot for the club so lets all drag out some paper and s. and write him an article.

73,
Bill, KFØW



Correction (cont.)



UPCOMING PPRAA PUBLIC SERVICE

SPRINGSPREE JUNE 20 and 21

OTHER HAPPENINGS

FIELD DAY JUNE 27 and 28



Zero Beat editor without
your help.

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What's Happening?

Superfest III

June 6 8:30 — 3:30
Island Grove Park Greeley
Talk in 146.25/85, 147.60/00, 146.52

IEEE Conference — Amateur Radio Night

June 17, 7 — 10 p.m.
Downtown Denver Hilton
(there are a few people going up for this one — get a hold of Smitty on 52 for info.)

FOR SALE — Icom 701 w/ps, Clipperton amp, Icom 720 w/ps, Astro 150, 20 amp ps, Kenwood AT 200 tuner. All mint. Leon WA6SDD — 574-5535.

FOR SALE — Heath HW 100 transceiver, HP 23 AC supply, HP 13A DC supply, 5B 600 speaker. All excellent. Roger KØKRC — 473-6823.

MEETING NOTICE

The June meeting of the Pikes Peak Radio Amateur Association will be held on June 10th at 7:30 p.m. at the First United Methodist Church, located at the corner of Nevada and Boulder Avenues, across from Palmer High School. This is our first meeting at this location, so don't forget!!! The program will cover preparations for Field Day. All members and interested persons are encouraged to attend.

ADVERTISING NOTICE

Zero Beat will gladly run any classified ad submitted to it. However, classifieds will run for **one** month only, unless the advertiser notifies Zero Beat to continue the ad. If more than one item is listed, please keep us informed as to what sold, so that the ads are accurate. Commercial advertisers are welcome to change or update their ads whenever necessary. The ads in Zero Beat are useful to our readers, let's keep them up to date and accurate.

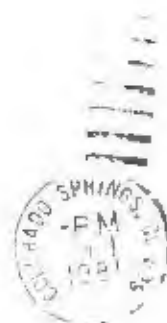


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Don Lohse KBØKQ
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